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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,809	12/27/2001	Marcel F.C. Schemmann	US010689	5377

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EXAMINER

PHAN, HANH

ART UNIT PAPER NUMBER

2638

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/029,809	Applicant(s) SCHEMMANN ET AL.	
	Examiner Hanh Phan	Art Unit 2638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 10/12/2005.
2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

-In claims 1, 8 and 12, the phrase "a first characteristic wavelength" was not described in the specification.

-In claims 1, 8 and 12, the phrase "a second characteristic wavelength" was not described in the specification.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

-In claim 1, lines 2-4, the phrase “**upconverting received signals to a unique frequency band** and **transmitting optical signals** representative of received signals” is unclear. How to convert the received signals to a unique frequency band. The frequency band is an electrical frequency or an optical frequency (wavelength). How to generate the optical signals and transmitting the optical signals.

-In claim 1, line 4, the phrase “**each optical signal transmitter** produces optical **signals**” is unclear. How an optical signal transmitter produces optical signals.

-In claims 1, 8 and 12, the phrases “**a first characteristic wavelength**” and “**a second characteristic wavelength**” are not defined. What a first characteristic wavelength and a second characteristic wavelength are defined.

-In claims 1 and 12, the phrase “**optical transmission lines being combined to form a single optical transmission line**” is not clear. **What element** for combining optical transmission lines to form a single optical transmission line.

-In claims 1, 8 and 12, the phrase “**no signal multiplexer**” is not defined. What the signal multiplexer is defined. For example, the signal multiplexer is a wavelength division multiplexer or time division multiplexer.

-In claim 8, lines 3 and 4, the phrase “**upconverting said signal inputs into a plurality of non-overlapping frequency bands** and **transmitting a plurality of optical signals**” is not clear. The plurality of non-overlapping frequency bands are

electrical frequencies or optical frequencies (wavelengths). How to generate the plurality of optical signals and transmitting the optical signals.

-**Claim 8** recites the limitation "**the optical signal transmitter**" in line 10. There is insufficient antecedent basis for this limitation in the claim.

-**In claim 12**, lines 2 and 3, the phrase " **a plurality of optical signal transmitters for receiving signal inputs and transmitting optical signals**" is not clear. How the optical signals are generated and transmitted.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 2, 6, 8-10, 12, 13 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US Patent No. 6,523,177) in view of Dyke et al (US Patent No. 6,351,582).

Regarding claim 1, 2, 6, 8, 9, 12, 13 and 17, referring to Figure 3, Brown teaches an optical transmission system comprising:

a plurality of optical signal transmitters (i.e., optical transmitters 418, Fig. 3) for receiving signal inputs (i.e., RF signal inputs, Fig. 3), upconverting received signals to a unique frequency band (i.e., upconverting the received signal to a unique optical frequency band 1550nm, Fig. 3) and transmitting optical signals representative of

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received signals, wherein each optical signal transmitter (418, Fig. 3) produces optical signal having a first characteristic wavelength (col. 4, lines 12-67 and col. 5, lines 1-50);

a plurality of optical transmission lines (i.e., optical fibers 420, Fig. 3) coupled to the optical signal transmitters (i.e., optical transmitter 418, Fig. 3), the optical transmission lines (optical fibers 420, Fig. 3) being combined to form a signal optical transmission line at a first end of the optical transmission line;

at least head end (i.e., headend 460, Fig. 3) coupled to a second end of the optical transmission line opposite the first end, the headend (460, Fig. 3) including at least one DWDM signal receiver (i.e., DMDM 470, Fig. 3), the at least one DWDM signal receiver having a second characteristic wavelength, the second characteristic wavelength corresponding to the first characteristic wavelength of the optical signal transmitter (col. 4, lines 12-67 and col. 5, lines 1-50);

Brown differs from claims 1, 2, 6, 8, 9, 12, 13 and 17 in that he fails to teach wherein the plurality of optical signals are combined with a splitter/combiner apparatus. However, Dyke in US Patent No. 6,351,582 teaches the plurality of optical signals are combined with a splitter/combiner apparatus (Fig. 1, col. 4, lines 29-45). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the plurality of optical signals are combined with a splitter/combiner apparatus as taught by Dyke in the system of Brown. One of ordinary skill in the art would have been motivated to do this since Dyke suggests in column 4, lines 29-45 that using such the plurality of optical signals are combined with a splitter/combiner apparatus have advantage of allowing combining the individual signals into a combined

signal and providing an optical communication system with high speed and high capacity.

Regarding claim 10, the combination of Brown and Dyke teaches combining the plurality of said optical transmission lines together in a plurality of locations between the transmission source and the headend without use of any signal multiplexing package (Fig. 1 of Dyke).

Regarding claims 18-20, the combination of Brown and Dyke teaches wherein the headend includes a single receiver (Fig. 3 of Brown).

9. Claims 3-5, 7, 11, 14-16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US Patent No. 6,523,177) in view of Dyke et al (US Patent No. 6,351,582) and further in view of Way (Pub. No.: US 2002/0021464 A1).

Regarding claims 3, 5, 7, 11, 14-16 and 21, Brown as modified by Dyke teaches all the aspects of the claimed invention except fails to specifically teach the frequency bands are separated by about 50Ghz. However, Way teaches the center frequencies of the lambdas range from 1530nm to 1562 nm with discrete center frequencies at a spacing selected 50Ghz (see page 2, paragraph [0031]). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the frequency bands are separated by about 50Ghz as taught by Way in the system of Brown modified by Dyke. One of ordinary skill in the art would have been motivated to do this since Way suggests in page 2, paragraph [0031] that using such the center frequencies of the lambdas range from 1530nm to 1562 nm with discrete center

frequencies at a spacing selected 50Ghz have advantage of allowing avoiding or minimizing cross talk.

Regarding claim 4, the combination of Brown, Dyke and Way teaches wherein each upconverter is characterized by the frequency band being unique to that the upconverter and different from each said frequency band created by each other the upconverter (see Fig. 3 of Brown and Figs. 1, 4 and 5 of Way).

Response to Arguments

10. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye, can be reached on (571)272-3078. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.


HANH PHAN
PRIMARY EXAMINER